REMARKS

Claims 9, 11, and 17 are all of the claims presently pending in the application. Applicants have canceled claims 1, 3, 5, 7, 13-16, 18, and 19 without prejudice or disclaimer. Applicants have amended claim 9 to define the claimed invention more particularly.

Applicants believe that entry of the claim amendments is proper since the claim amendments do not raise new issues, which would require further consideration and/or search. Furthermore, the claim amendments reduce the issues for appeal.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1, 3, 5, 7, and 13-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanisawa, et al. (U.S. Patent No. 6,547,890). Claims 9 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanisawa in view of Makino, et al. (U.S. Publication No. 2002/0173363).

Applicants respectfully traverse these rejections in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention of exemplary claim 9 provides a method of manufacturing a steel for use in a high strength pinion shift includes hot rolling the steel at a temperature of 700°C to 850°C under a draft ratio at an area reduction of 10% or more and high frequency hardening the steel (e.g., see Application at Table 1). Furthermore, a hardness of the steel

before the high frequency rolling and after hot rolling is in a range of 24 HRC to 30 HRC, and wherein a surface hardness of the steel after the high frequency hardening is 650 HV or more. Furthermore, a pearlite block size of the steel is 100 μm or less as a circle equivalent diameter.

Accordingly, the claimed invention provides a steel for use in a high strength pinion shaft which can provide excellent effect of less occurrence of peeling upon hobbing, having higher surface hardness and impact value and torsional strength after high frequency hardening, and having less heat treatment strains (see Application at page 5, lines 5-12).

II. THE PRIOR ART REJECTIONS

A. Claims 1, 3, 5, 7, and 13-19

The Examiner alleges that Kanisawa teaches the claimed invention of claims 1, 3, 5, 7, and 13-19.

Applicants have canceled claims 1, 3, 5, 7, 13-16, 18, and 19.

The cancellation of these claims renders the Examiner's rejection moot.

B. The Makino Reference

The Examiner alleges that one of ordinary skill in the art would have combined Makino with Kanisawa to teach the claimed invention of claims 9 and 11. Applicants submit, however, that, even if combined, the alleged combination of references would not teach or suggest each and every feature of the claimed invention.

That is, the alleged combination of references does not teach or suggest, "*wherein a hardness of said steel before the high frequency rolling and after hot rolling comprises a*

range of 24 HRC to 30 HRC, wherein a surface hardness of said steel after said high frequency hardening comprises 650 HV or more, and wherein a pearlite block size of the steel is 100 μm or less as a circle equivalent diameter", as recited in exemplary claim 9.

According to the claimed invention, the steel before being subjected to the high frequency hardening has a hardness (24-30 HRC) suitable for being worked by a machining tool to manufacture a pinion shaft. That is, since the hardness of the steel is not excessively high, the machining tool does not bear the excess load and thus the tool life is ensured and further since the hardness of the steel is not excessively low, the sufficient strength of the manufactured pinion shaft is ensured. Further, since pearlite block size of the steel is 100 μm or less as a circle-equivalent diameter, the occurrence of peeling on the steel at the time of gear cutting by a hob, etc., can be suppressed.

Furthermore, when the steel is subjected to high frequency hardening, the strength and wear resistance of the pinion shaft can be secured (surface hardness to be 650 HV or more).

The alleged combination of references does not teach or suggest these features of the claimed invention.

Moreover, the alleged combination of references does not teach or suggest, "*0.015wt% or less N*", as recited in exemplary claim 9.

Indeed, the Examiner concedes that the alleged combination of references does not teach or suggest this feature of the claimed invention (see table at page 3 of the Office Action dated December 19, 2008).

Therefore, Applicants submit that, even if combined, the alleged combination of references would not teach or suggest each and every feature of the claimed invention. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this

rejection.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicants submit that claims 9, 11, and 17, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. Applicants respectfully request the Examiner to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, Applicants requests the Examiner to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The undersigned authorizes the Commissioner to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: March 10, 2009

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FACSIMILE TRANSMISSION

I hereby certify that I am filing this paper via facsimile, to Group Art Unit 1793, at (571) 273-8300, on March 10, 2009.

Respectfully Submitted,

Date: March 10, 2009

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